

curriculum vitae: Carl Hawkings BSc, MEnvSc, MIAQM

Synopsis

A resourceful team player who works well under pressure. Extensive (25 years) experience of environmental management including environmental assessment, auditing, project and contractor management and training.

Worked for a broad range of clients. Detailed experience in several business sectors including transport, oil and gas, power, cement and incineration. Detailed technical knowledge of air quality, modelling etc. Having worked both client-side and as a consultant Carl has an invaluable perspective on deliverables. Visiting lecturer/mentor at UCL London (MSc/BSc).

Contact Details

16-19 Southampton Place
London WC1A 2AJ +44 7767 214 630
carl.hawkings@ADMLtd.com

Qualifications and Professional Memberships

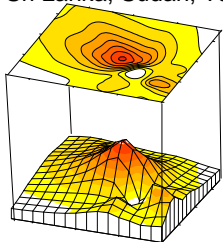
- Member, Institute of Air Quality Management (IAQM)
- Member, Institute of Environmental Sciences (IES)
- Member, Environmental Protection UK formerly National Society for Clean Air and Environmental Protection (NSCA)
- Member, International Association of Impact Assessment (IAIA)
- BSc (Hons) Environmental Sciences, University of London, 1985
- *Knowledge – Level (Shell International Health Services, accreditation system) in Health Impact Assessment (HIA)*

Career History

2000-now: ADM Ltd, UK
2005-now: World Bank Group (ad hoc)
2002-2009: Shell (secondment)
1987-2000: ERM, London, UK
1986-1987: UN FAO, Sudan
1986: Save the Children Fund, UK

Country Experience (extensive in those underlined)

Abu Dhabi, Australia, Azerbaijan, Brunei, Chile, China, Cyprus, Dubai, Egypt, Germany, Gabon, Greece, Hong Kong, India, Italy, Iran, Kazakhstan, Libya, Malaysia, Mexico, The Netherlands, Nigeria, Pakistan, Peru, Qatar, Russia, Saudi Arabia, Singapore, Spain, Sri Lanka, Sudan, Turkey, UK, Uruguay.



Skills and Experience

Major Project Development

Has worked on over 100 EIAs/ESHAs in various capacities (air quality, project manager, project director, procurer, client representative and reviewer). The EIAs/ESHAs have been for a wide variety of sectors including oil and gas, cement, incineration, transport infrastructure (roads, airports and rail links) and power.

Seconded to Shell as a full time, and since 2007, a part-time consultant managing Environmental, Social and Health risks for major capital projects. Technical reviewer for Shell's new internal procedures on matters such as EIA/ESHA/IA, Air Quality and Biodiversity.

Worked since 2005 as an *ad hoc* technical expert and auditor for the World Bank Group's Compliance Advisor Ombudsman (CAO) in Russia, and Kazakhstan and South America in various sectors.

Project Planning and Implementation

Experienced at project planning and implementation. Developing and implementing contracting strategies for Environmental, Social and Health Assessments (ESHAs, EIAs etc) Writing terms of reference for a variety of studies and tender evaluations, award of contracts and managing third party environmental consultancy contracts. Has worked for both contractors and clients and therefore has a good overview and practical approach to delivering work on time and on budget.

Scientific and Technical

Experienced in UK and EU law and other guidance (such as World Bank, Shell) relating to many industrial sectors.

Developing and agreeing project standards and guidelines at Shell Group level.

Experience working in multidisciplinary teams in multiple locations.

Technical background in the general field of environmental media, very strong in air quality. Practical experience of all aspects of air quality management including modelling, monitoring, emissions inventories and abatement. Technical advice on air Pollution and Pollution Prevention and Control (PPC).

Industry Sector Experience

- Oil and Gas: onshore / offshore, gas and oil platforms, gas plants, pipelines, LNG import/export and refineries.
- Power Plants: extensions, upgrades and new builds; oil, gas, wind, coal fired, in the UK and abroad.
- Cement Works: new and existing plants in the UK and Pakistan.
- Incinerators: UK and abroad, municipal, hazardous and clinical waste.
- Infrastructure Projects: including international airports (Athens, Kuala Lumpur, London Heathrow, Malpensa), roads, rail termini, rail and tube links in UK, Europe & Hong Kong.
- Other Sectors: sewage treatment works, carbon black plants, waste landfills and lead smelters.

World Bank Group/ CAO (2005-

ongoing) Technical advisor specialising in oil, gas, pulp, paper and air quality. Involved in several projects investigating complaints made to the CAO by affected parties. Work has included projects in Uruguay, Russia and Kazakhstan involving audit, investigation and reporting.

Uruguay (Botnia, Fray Bentos, 2010):

Carl worked as the sole technical expert on an *Appraisal* to determine whether IFC had discharged their duties adequately in supporting and providing a loan for the construction of a large Pulp mill in Uruguay. The formal complaint to CAO related to air quality, odour and water quality and concluded that the IFC had applied the WBG guidance correctly and carried out their responsibilities.

Russia (Ruskiy Mir, Taman 2009):

Work related to a complaint about IFCs investment in an onshore LPG/Fuel Oil Terminal. Residents were concerned about the environmental and safety risks likely to result from the pipelines and the other facilities.

Kazakhstan (Lukoil, Berezovka 2008):

Work involved an *Audit* of whether the IFC assured themselves that relevant guidelines and laws were applied when a loan was provided to expand a large onshore oil and gas development. The audit, that included a site visit, concluded that the IFC were out of compliance at the time of investment (a rare conclusion for this type of audit) and so considerable back-up work was done to support this conclusion.

curriculum vitae: Carl Hawkings BSc, MEnvSc, MIAQM

Environmental Permits

Authored and managed numerous permits to operate around the world including Environmental Permits for FMENV/ Nigeria, and PPC/UK and for a range of industry sectors including power plants, incinerators, integrated steel works, cement plants, offshore platforms, onshore gas terminals. Work has involved all stages:

- Drafting and editing the relevant documents
- BPEO and BAT assessments of a variety of process aspects (including choice of technology, burner type etc).
- Coordination of the input of multidisciplinary teams.
- Preparation and submission of environmental impact assessments and other planning related documents.
- Detailed negotiations with the relevant regulator in the UK and abroad.

At ERM and ADM Limited Carl has managed and undertaken numerous environmental studies. These involved detailed technical work in the field of air pollution (eg monitoring, dispersion modelling, policy development) and in areas such as ecology, human health risk assessment, health impact assessment, land and water contamination.

The work included preparing and editing assessments for Government and third party/lender/bank approval (including the World Bank Group and the Asian Development Bank).

Major Projects

Carl has provided advice at all levels to projects in the various phases of design and development (site selection, design, construction, operation, retrofit, and decommissioning). He has a focus on environmental social and health issues but also has contributed to Health and Safety work. The following illustrates the type of work he has been involved with and his responsibilities.

Shell/AgipKCO: Kashagan Full Field Oil and Gas development: 2008-09

Technical advisor on air quality supporting several large modelling studies including regional ozone modelling.

Nigeria LNG: Train 6 and 7+ Environmental, Social and Health Impact Assessment (2004-09)

Member of the SGSi team acting as technical advisor to the project prior to Final Investment Decision (FID) including specialist advice on air monitoring, assessment of impacts and mitigation.

SPDC: AFAM Power Plant, Gas and Power/SPDC, Port Harcourt, Nigeria (2003-07) HSE and SD co-ordinator for Gas and Power, assistance to SPDC on integrated Environmental, Social and Health Assessment, technical advisor on detailed studies (noise, air, water). HSE/SD advice in relation to the project execution plan (PEP), Invitations to tender (ITTs).

Nigeria LNG: LNG Train 4/5 Environmental, Social and Health Management Plan - Nigeria LNG (2004-06) Reviewed and advised on the implementation of detailed ESH Management Plan (air quality aspects) for the NLNGPlus project. Advice provided regarding management of independent verification consultants for International Financing Institutions, progress reporting and implementation logistics.

Petrofac: Pollution Prevention and Control (PPC) for a new installation (2008-9) Project coordinator and author of a PPC application for a floating platform newly sited in the North Sea. Carl worked with Metoc Ltd to produce the PPC application including the dispersion modelling of pollutants.

UK Steel Company: Integrated Steel Plant (1999) Assisted the operators with environmental permits for the plant including determining BAT/BPEO for an aging plant.

Environmental Management Plan for Baku, Azerbaijan for JICA/KKC Ltd (1999-2001) Assisted 15-person multidisciplinary team from Kokusai Kogyo Consultants (KKC) Ltd in preparing a management plan for the city of Baku, a JICA funded project. Advised and developed status and options reporting relating to air quality issues and regulation. Worked closely with the Azeri industry regulators.

Shell EP/Agip KCO: Kashagan Full Field Development (2008-now)

Technical expert on air quality, including review of tenders, inputs and outputs for all issues related to local and regional air quality impacts from an acid gas field.

Shell EP: 16 PPCs Offshore Platforms in the North Sea, UK (2006-2008)

Project coordinator and technical reviewer. This project involved managing the preparation of submissions (permits to operate) to the UK regulator (DTI). Carl managed the 16 separate teams within Shell and third party contractors. He was also part of Shell's BERR liaison team.

Bacton Gas Plant, PPC Permit Application, Shell UK (2006-08)

Project managed the production of the application for the permit to operate (PPC Application). Technical review of the application and management/ tendering etc of contractors. Shell's representative on the Bacton Environmental Forum, comprising all operators at Bacton and the Regulator.

Her Majesty's Inspectorate of Pollution (now the Environment Agency (EA): Editor and Compiler of annual reports (1994-1996)

Principal editor and compiler of the two annual reports prior to combination of HMIP and NRA to form the EA. Work involved liaison with field inspectors and other HMIP staff, including the press office in order to prepare text for formal approval by the UK Government's Editorial Board.

Shell Downstream: European Refinery Technical Network (2006-09) Technical advisor on air quality and EU Regulatory Regime to Shell's internal refineries network.

Persian LNG: Environmental, Social and Health Impact Assessment – Iran (2005-08) Member of the SGSi team managing the ESHA, including specialist advice on air monitoring, assessment of impacts and mitigation.

Shell EP UK: NOx Reductions Study for GTs and Furnaces, Expro/St

Fergus Gas Plant (2002-03) Managed and authored a BPEO/BATNEEC study for submission to the regulator (SEPA) examining the possibilities for NOx reduction at GTs and furnaces at St Fergus. Included a cost benefit analysis of the operation and recommendations.

Kashagan Oil Fields for Agip KCO Corporate HSEQ department,

Kazakhstan (2004-09) Working in the team from SGSi providing ongoing HSE/SD/SP advice and support to Agip KCOs corporate HSEQ department in the Hague. Carl developed and assisted in the adoption of the Corporate Health, Safety, Security, Environmental and Social commitments/premises that were developed as a guide to all of the Agip KCO projects.

Shell Eastern Petroleum Ltd:

Houdini/Roy, Pulau Bukom, Singapore, (2002-03) Managed the ESHA process at the Feasibility stage of the project. Provided input to VAR 3 stage gate. Provided HSE advice and prepared the HSE inputs to the hibernation documentation.

curriculum vitae: Carl Hawkings BSc, MEnvSc, MIAQM

Shell Chemicals: ASPIRE Iran

(2002-04) Provided technical advice on air quality issues including monitoring, emissions estimates, dispersion modelling etc.

Shell JV: Integrated Field Development, EP, Saudi Arabia,

(2002-03) Pre-qualification of Environmental Consultants to undertake Environmental, Social and Health Assessments (ESHAs) for Seismic Survey, Gas Field Development, Gas Processing, Pipeline, power Plant and Desalination Plant, Saudi Arabia.

Greenhouse Gas / Climate Change

Energy Management (Shell UK), 2006-2008

Project managed 10 energy assessments as part of PPC permits for North Sea platforms in order to develop energy efficiency improvement and CO₂ reduction programs. Work involved getting senior management to agree to implement energy saving opportunities.

CO₂ Management (Shell UK) 2007-2008

Participation in UK program of change management to raise awareness and set appropriate key performance indicators for each area of business in order to effect a change in attitude to energy efficiency and greenhouse gas emissions.

Global Newsletter, (Shell Corporate) 2003-

2009 Participation in Shell's Climate Change network and provision of technical advice in producing the global Climate Change newsletter for 3000+ interested parties worldwide.

Energy Management Plans (Shell Global Solutions) 2005-2008 Assistance in developing an internal protocol for the evaluation and cross-company reporting of energy efficiency opportunities.

The Cement Sustainability Initiative (ADM/WBCSD) (2002) Invited participant to the World Business Council for Sustainable Development (WBCSD) conference on "Sustainability and the Cement Industry, participated in discussions on target setting, managing emissions etc.

1985-2002

Before becoming an independent consultant with ADM, Carl was an employee of ERM and managed more than 100 IPC/PPC and environmental impact assessment (EIA) projects as well as a range of other types of environmental work. He was responsible for client liaison, budget, liaison with the regulator and in many cases all the deliverables.

Transport Sector

- Writing guidance for the UK Government on the assessment of the air quality impacts during multi-modal assessment of transport strategy and policy (GOMMS, now WebTAG)
- Kuala Lumpur International Airport, Sepang; Ministry of Transport
- New Athens International Airport, Athens; Athens Airport SA
- Heathrow Terminal 4, Heathrow Airport; BAA
- Malpensa Airport Expansion, for the Italian Airport Authority
- Second Forth Road Crossing; Scottish Office
- West Midlands: Midland Metro for Centro
- Chelsea-Hackney Line: for London Underground
- EIA and "Before and After" Environmental Indicators report; Jubilee Underground Line Extension
- Channel Tunnel Rail Link; Union Railways Limited
- Trans-Pennine Multi-Modal Study, UK DETR
- Environmental Assessment of Metrolink, for Gtr Manchester PTE
- Channel Tunnel Rail Link (CTRL) Route and London Terminus

Other Projects

Carl has worked in various capacities including air quality specialist, project manager and provided other management or technical input to the following projects:

- Mixed Use Development adjacent to a Large Landfill Site, Central England, Peter Brett Associates
- EIA of a Gas processing plant, Egypt ERM/Burullus
- Institutional Strengthening Project to Enhance the Environmental Capabilities of the Chilean Government, for ODA (specialist training in air quality management and control, pilot project in Region 2)
- Odour assessment and monitoring, Sewage Treatment Plant, West of Scotland Water
- Odour assessment and monitoring, Sewage Treatment Plant, East of Scotland Water
- EIA for a 160MW_e CCGT in Colombo, Sri Lanka, AES Ltd (World Bank/ADB)
- EIA of a 40MW_e Energy from Waste Facility, UK for Independent Energy UK Limited
- Recycled Liquid Fuel Burning in Cement Kilns, plus IPC/IPPCs and EIAs for several cement works in the UK for Blue Circle Industries plc (now Lafarge Cement UK)

- EIA of a 10MW_e Wind Farm, UK for Independent Energy UK Limited
- PPC/IPC Permits, and Planning Submissions for a Meat and Bone Meal Incinerator, UK for Shanks Waste Solutions
- EIA and IPC Application for an 800MW_e CCGT in Lincolnshire, British Energy
- Extension to a CCGT in Rugby and Keadby, Scottish Hydro-Electric plc
- Option Evaluation and EIA of Channel Tunnel Rail Link (CTRL) London Terminus and Rail Route
- Air Quality Monitoring in Oil Fired Power Station in Mexico

UCL MSc Fluid Dynamics Course: Carl has recently lectured on an MSc course at University College London (UCL), UK. This involved introducing the MSc and PhD students to the practical applications of fluid dynamics.

Publications

In addition to writing sections of or whole reports for the projects listed above and many others, most of which are now in the public domain, Carl was co-author/editor of the following publications:

- Hawkings C and Hilliard R (2001) IPPC and Energy from Waste presented at IPPC Improved Regulation conference held at the Society for Chemical Industry, London
- Hawkings C, Eduljee G, Darlington S (1998) A Baseline Soil Survey in the South Dudley Area Environment Agency (UK)
- Barrowcliffe R, Varey R and Hawkings C (1996) *Air Quality in the Vicinity of Southampton Water* Environment Agency/HMIP (UK)
- Harrison R, Barrowcliffe R and Hawkings C (1995) Assessment of the Impact of Lead Releases from Britannia Recycling Ltd, HMIP Environment Series, Report No 3
- Her Majesty's Inspectorate of Pollution (1995) Annual Report 1994/5, HMSO
- Her Majesty's Inspectorate of Pollution (1996) Annual Report 1995/6, HMSO
- UK Department of the Environment (DoE) (1993) Quality of Urban Air Review Group (QUARG), HMSO
- UK DoE (1991) UK Urban Air Quality Monitoring Network HMSO
- Hawkings C and Barrowcliffe R (1992) Air Quality Assessment, University of Nottingham